

IN THE CLAIMS

Claim 1 has been amended as follows:

1. (Previously Presented) A method for determining an aspiration flow and an aspiration time for aspiration of a dead space, associated with breathing assistance involving a breathing cycle having an expiration phase and an inspiration phase, comprising the steps of:

determining a volume of a dead space to be aspirated during the expiration phase;

determining an expiration flow with respect to time during at least a portion of the expiration phase; and

optimizing an aspiration time and an aspirating flow, for aspirating said dead space, dependent on said volume of said dead space and said expiration flow with respect to time to allow said dead space to be aspirated during ongoing expiration with a minimum of interference to flow balance in said expiration flow at at least one point selected from the group consisting of a point upstream of said dead space and a point downstream of said dead space.

2. (Original) A method as claimed in claim 1 comprising supplying fresh gas to the dead space during the inspiration phase.

3. (Original) A method as claimed in claim 1 wherein the step of measuring an expiration flow comprises measuring said expiration flow downstream from said dead space and adding said aspiration flow to the measured expiration flow.

4. (Original) A method as claimed in claim 1 wherein the step of optimizing the aspiration time and the aspiration flow comprises maintaining said aspiration time below a predetermined upper limit for the aspiration time and maintaining the aspiration flow below a predetermined upper limit for the aspiration flow.

5. (Original) A method as claimed in claim 1 comprising determining the aspiration flow according to the equation:

$$\dot{V}_{aspids}(t) = \dot{V}_{exp}(t) + \frac{V_D}{t_{aspids}}$$

where $\dot{V}_{aspids}(t)$ is the aspiration flow; $\dot{V}_{exp}(t)$ is the determined expiration flow; V_D is the dead space volume and t_{aspids} is the aspiration time.

6. (Original) A method as claimed in claim 1 wherein the step of determining an expiration flow comprises measuring the expiration flow with respect to time during an expiration phase wherein no aspiration occurred, preceding said expiration phase in which the dead space is to be aspirated.

Claim 7 has been cancelled.

7. (Cancelled)